University Honors and Scholars Programs

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University Honors and Scholars Programs (UHSP) cultivate a signature student experience beyond the traditional boundaries of the classroom and across learning communities. UHSP’s mission is to offer curricular and co-curricular honors and scholars programming for students seeking opportunities to shape a distinctive undergraduate pathway that will challenge them, help them grow, build connections, and develop adaptability beyond their technical degrees. UHSP develops the professional and interpersonal skills engineers and scientists need to succeed in their professions and to make an impact in their various communities. By emboldening interdisciplinary collaboration and experiential learning, UHSP fosters critical thinking, leadership, creativity, and innovation. UHSP opportunities include: interdisciplinary honors pathways, immersive scholars activities, National Collegiate Ethics Bowl participation, explorations in the creative arts, distinct hands-on curricular based research and mentorship, and STEM-Ed teaching.

UHSP is open to all students regardless of their majors; our programs are designed to cultivate a strong sense of community alongside professional and personal development. Our vision is that all Mines students can choose to have comprehensive, educational experiences where they discover, explore, and pursue their passions.

UHSP Programs:

- Thorson First-Year Honors Experience
- Grand Challenge Honors Experience
- McBride Honors Program in Public Affairs
- Grand Challenge Scholars Program
- Undergraduate Research Scholars
- Teach@Mines

Visit the University Honors and Scholars Programs website: honors.mines.edu

Thorson First-Year Honors Experience

The Thorson First-Year Honors Experience is a unique and collaborative approach to learning that uses real-world problems to introduce students to the roles engineers and scientists play in a fast-changing world. Working closely with some of the best teachers across the humanities, engineering, and sciences, students in the Honors Community come to see how the global challenges of the future require innovative and creative thinking.

The curricular component of the Thorson First-Year Honors Experience is a 2-semester interdisciplinary course sequence called IDEAS – Innovation and Discovery in Engineering, Arts, and Sciences. In IDEAS, students explore critical and creative thinking, design, and ethical problem-solving through a multitude of lenses: they learn to think like an artist, an engineer, a designer, an activist, a poet, and a scientist.

The course sequence fulfills core curriculum requirements for all majors by replacing two required core courses (HASS 100 Nature and Human Values and EDNS 151 Design I).

We believe a world of IDEAS is also a world worth exploring, and each year we offer new and different opportunities within and beyond the course. We aspire to provide all our students with the chance to enrich their first-year at Mines in unique ways. Through community engagement opportunities, project-based learning, and teamwork Thorsonites investigate the intersection of art, design, culture, and society here in the US and abroad. Co-curricular components of the program include local field trips, community events and socials, as well as limited scholarships for some of the program's participants. Through all of these curricular and co-curricular experiences and interactions, learning extends beyond the classroom into the lasting friendships that students develop over the course of their first-year.

Courses:

HNRS105. INNOVATION AND DISCOVERY IN ENGINEERING, ARTS, AND SCIENCES I. 3.5 Semester Hrs.

(i) (WI) “Innovation and Discovery in Engineering, Arts, and Sciences” (IDEAS) applies honors pedagogies in a multidisciplinary, integrated environment that highlights the seamless boundaries between science and engineering, design, ethics, and the arts as a path toward making value-informed technical decisions. In addition to developing foundational skills in engineering design and problem-solving, students examine place, identity, citizenship, and community in various contexts as they learn what it means to be an engaged and mindful citizen and professional. IDEAS poses ethical problems and hands-on design challenges from a multitude of lenses. It incorporates experiential learning, team-based projects, and seminar discussions to encourage students to think both critically and creatively about their world. Students must pass both HNRS 105 and HNRS 115 to meet degree requirements. If students drop either of these courses, they must take both HASS 100 and EDNS 151 or their equivalents in order to graduate. 3 hours lecture; 1.5 hours lab; 3.5 semester hours.

HNRS115. INNOVATION AND DISCOVERY IN ENGINEERING, ARTS, AND SCIENCES II. 3.5 Semester Hrs.

(ii) (WI) “Innovation and Discovery in Engineering, Arts, and Sciences” (IDEAS) applies honors pedagogies in a multidisciplinary, integrated environment that highlights the seamless boundaries between science and engineering, design, ethics, and the arts as a path toward making value-informed technical decisions. Students examine place, identity, citizenship, and community in various contexts as they learn what it means to be an engaged and mindful citizen and professional. IDEAS poses ethical problems and hands-on design challenges from a multitude of lenses. It incorporates experiential learning, team-based projects, and seminar discussions to encourage students to think both critically and creatively about their world. Students must pass both HNRS 105 and HNRS 115 to meet degree requirements. If students drop either of these courses, they must take both HASS 100 and EDNS 151 or their equivalents in order to graduate. Prerequisites: HNRS 105. 3 hours lecture; 1.5 hours lab; 3.5 semester hours. In order to move on to HNRS 115, HNRS 105 must be completed with a C- or better.

Visit: thorson.mines.edu

McBride Honors Program

The McBride Honors Program in Public Affairs offers an honors minor consisting of seminars, courses, and off-campus activities that has the primary goal of providing a select number of students the opportunity to cross the boundaries of their technical expertise into the ethical, cultural, socio-political, and environmental dimensions of human life. Students will develop their skills in communication, critical thinking, and leadership through seminar-style classes that explore diverse aspects of the human
experience. The seminars are designed to offer coherent perspectives across the curriculum, allowing for a maximum degree of discussion and debate on complex topics. Themes, approaches, and perspectives from the humanities and the social sciences are integrated with science and engineering perspectives to develop in students habits of thought necessary for a comprehensive understanding of societal and cultural issues that enhance critical thinking, social responsibility, and enlightened leadership.

Please see the McBride Honors Program in Interdisciplinary Minors for more details about this program.

Visit: mcbride.mines.edu

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### Grand Challenge Scholars Program

The Grand Challenges Scholars Program (GCSP) prepares students to be world-changers and impact-makers. The GCSP offers a way to combine coursework, extracurricular activities, and experiences that prepare you to address complex socio-technical issues, such as the National Academy of Engineering (NAE) Grand Challenges and the United Nations Sustainable Development Goals, while receiving certification from the NAE and a designation on your transcript. As a Scholar, you will have the chance to choose your own pathways to gain skills in interdisciplinary thinking, working across diverse cultures, applying engineering and science in the service of others, entrepreneurship, and addressing problems through design, research, and creativity.

Visit the Grand Challenge Scholars Program website.

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### Undergraduate Research Scholars

The office of Undergraduate Research Scholars works hard to provide students a wide array of opportunities to conduct cutting-edge research led by Mines faculty mentors. Research opportunities include fellowships, research assistantships, and even obtaining credits for research. Programs such as the First-Year Innovation & Research Scholar Training (FIRST) and Mines Undergraduate Research Fellowship (MURF) can help incoming students get a head start in their field of interest.

Visit the Undergraduate Research Scholars website.

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### Teach@Mines

Teach@Mines offers courses, a Teaching Minor, advising, and information on certification pathways to help you explore and learn more about the teaching profession.

Teach@Mines is tailored specifically to the needs of Mines students and alumni, which means we have non-traditional pathways towards licensure.

We offer courses and a Teaching Minor for students to both try out teaching and to prepare to teach (K-12 or college). A person can start on this path at any point in their Mines career as an undergraduate, graduate student, or as a Mine’s alumni. The earlier you begin, the more flexibility you have.

Please see the Teach@Mines Interdisciplinary Minor for more details about this program.

Visit the Teach@Mines website.

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### HNRS105. INNOVATION AND DISCOVERY IN ENGINEERING, ARTS, AND SCIENCES I. 3.5 Semester Hrs.

(I) (WI) “Innovation and Discovery in Engineering, Arts, and Sciences” (IDEAS) applies honors pedagogies in a multidisciplinary, integrated environment that highlights the seamless boundaries between science and engineering, design, ethics, and the arts as a path toward making value-informed technical decisions. In addition to developing foundational skills in engineering design and problem-solving, students examine place, identity, citizenship, and community in various contexts as they learn what it means to be an engaged and mindful citizen and professional. IDEAS poses ethical problems and hands-on design challenges from a multitude of lenses. It incorporates experiential learning, team-based projects, and seminar discussions to encourage students to think both critically and creatively about their world. Students must pass both HNRS105 and HNRS 115 to meet degree requirements. If students drop either of these courses, they must take both LAIS100 and EPIC151 or their equivalents in order to graduate. 3 hours lecture; 1.5 hours lab; 3.5 semester hours. Prerequisite: C- or better in HNRS105.

### HNRS115. INNOVATION AND DISCOVERY IN ENGINEERING, ARTS, AND SCIENCES II. 3.5 Semester Hrs.

(II) (WI) “Innovation and Discovery in Engineering, Arts, and Sciences” (IDEAS) applies honors pedagogies in a multidisciplinary, integrated environment that highlights the seamless boundaries between science and engineering, design, ethics, and the arts as a path toward making value-informed technical decisions. Students examine place, identity, citizenship, and community in various contexts as they learn what it means to be an engaged and mindful citizen and professional. IDEAS poses ethical problems and hands-on design challenges from a multitude of lenses. It incorporates experiential learning, team-based projects, and seminar discussions to encourage students to think both critically and creatively about their world. Students must pass both HNRS105 and HNRS115 to meet degree requirements. If students drop either of these courses, they must take both LAIS100 and EPIC151 or their equivalents in order to graduate. 3 hours lecture; 1.5 hours lab; 3.5 semester hours. Prerequisite: C- or better in HNRS105.

### HNRS198. SPECIAL TOPICS. 6.0 Semester Hrs.

A Special Topics course will be a pilot course in the UHSP curriculum or will be offered as an enhancement to regularly-scheduled UHSP seminars. Special Topics courses in the UHSP curriculum will not be offered more than twice. Variable credit: 1 - 6 semester hours. Repeatable for credit under different titles.

### HNRS199. INDEPENDENT STUDY. 1-6 Semester Hr.

Under special circumstances, a UHSP student may use this course number to register for an independent study project which substitutes for or enhances the regularly-scheduled UHSP curriculum seminars. Variable credit: 1 - 6 semester hours. Repeatable for credit.

### HNRS298. SPECIAL TOPICS. 1-6 Semester Hr.

A Special Topics course will be a pilot course in the UHSP curriculum or will be offered as an enhancement to regularly-scheduled UHSP seminars. Special Topics courses in the UHSP curriculum will not be offered more than twice. Variable credit: 1 - 6 semester hours. Repeatable for credit under different titles.

### HNRS299. INDEPENDENT STUDY. 1-6 Semester Hr.

Under special circumstances, a UHSP student may use this course number to register for an independent study project which substitutes for or enhances the regularly-scheduled UHSP curriculum seminars. Variable credit: 1 - 6 semester hours. Repeatable for credit.
HNRS398. SPECIAL TOPICS IN THE UNIVERSITY HONORS AND SCHOLARS PROGRAM. 1-6 Semester Hr.
A Special Topics course will be a pilot course in the University Honors & Scholars Programs curriculum or will be offered as an enhancement to regularly-scheduled UHSP seminars. Special Topics courses in the UHSP curriculum will not be offered more than twice.

HNRS399. INDEPENDENT STUDY. 1-6 Semester Hr.
Under special circumstances, a UHSP student may use this course number to register for an independent study project which substitutes for or enhances the regularly-scheduled UHSP curriculum seminars. Variable credit: 1 - 6 semester hours. Repeatable for credit.

Director
Toni Lefton, Executive Director, University Honors & Scholars Programs

Teaching Associate Professors
Melanie Brandt, Director, McBride Honors Program
Justin Latici, McBride Practicum Advisor
CJ McClelland, Director, Grand Challenge Scholars Program

Teaching Assistant Professor
Lauren Shumaker, Director, Thorson First-Year Honors Experience

Research Associate Professor
Wendy Adams, Director, Teach@Mines

Administrative Faculty
Lakshmi Krishna, Director, Undergraduate Research Scholars

Administrative Support
Karin Murray, UHSP Program Coordinator
Katie Vuletich, Undergraduate Research, Administrative Assistant
Allie Costley, Teach@Mines Program Coordinator